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AND EXPERIMENTS, PROCURES KNOWLEDGE FOR MEN"—SMITHSON

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ON THE RELATIONSHIP OF THE GENUS AULACOCARPUS,
WITH DESCRIPTION OF A NEW PANAMANIAN SPECIES

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The genus *Aulacocarpus*, as originally regarded¹ by its founder, Dr. O. Berg, included two species, *A. Sellowianus* Berg, from Brazil, and *A. crassifolius* (Benth.) Berg, from Colombia. The latter was first described as *Campomanesia crassifolia* Benth.,² upon material collected by the botanists of the *Sulphur* voyage on Gorgona Island, off the Pacific coast of Colombia, between Buenaventura and Tumaco. The Flora of the British West Indies by Grisebach contains³ the description of a new species, *A. quadrangularis*, from Antigua and Guadeloupe Islands; and subsequently the same author added his *A. Wrightii*, originally collected in Eastern Cuba.⁴

Thus, in 1866 *Aulacocarpus* had been increased to four species,⁵ but the flower of none of these had ever been described. Taking into consideration the general distribution of the Myrtaceae, it was but logical, in the absence of more complete information, to find a place for this genus among the Myrtoideae, which are widely dispersed in America. According to Berg, its affinities were with *Campomanesia*, a supposition which was strengthened by the original inclusion in this genus of one of the species of *Aulacocarpus*. On the other hand, Niedenzu, taking as a basis the embryonic characters, places it among the *Eugeniinae*.

During his exploration of the forests of Eastern Panama, in 1911, the writer had the good fortune to discover a new representative of *Aulacocarpus* in the shape of a medium-sized tree, from which herbarium specimens were obtained, the flowers being preserved in alcohol. The description of these shows that, contrary to every expectation, *Aulacocarpus* is not a true Myrtoid, but must be placed among

¹ *Limnæa* 27: 345. 1856. Martius, Fl. Bras. 14¹: 380. 1857.

² Bot. Voy. Sulphur 97. pl. 37. 1844.

³ Page 239.

⁴ Cat. Pl. Cub. 90. 1866.

⁵ Niedenzu, however, ignores Grisebach's Antillean species (Engl. & Prantl, Pflanzenfam. 3⁷: 83. 1898).

the Leptospermoideae, also represented in South America by the Chilean genus *Tepualia*. This will be made clear by the following amended and completed description:

AULACOCARPUS Berg.

Receptacle forming a crater-like cup above the ovary. Sepals 5, short, obtuse or acute. Petals 5, unguiculate, apiculate. Stamens 10, inserted on the margin of the receptacle, 5 opposite to, 5 alternate with the sepals, curved outward beyond the corolla, the basifixed 2-celled anthers hanging around the receptacle; anther cells longitudinally dehiscent. Ovary 5-celled, each cell with 5 (or 4) ovules; style simple, truncate. Drupe depressed-globose, horny or sublignose, 5 to 1-celled, each cell with 1 seed. Seed albuminose, covered with a thick, suberose testa. Cotyledons plano-convex, thick; radicle basal, very short. Trees with very hard wood; leaves opposite, exstipulate, thick, obscurely veined; flowers single or few in a cluster, pseudo-axillary.

Species 5, Tropical American.

On account of its fundamental characters, viz.: exalbuminose seed, short basal radicle, ovate-depressed seeds, indehiscent woody drupe, 5-celled ovary, and 10 stamens, with basifixed anthers, *Aulacocarpus* would take perhaps an intermediary position between the *Calothamninae* and the *Chamaelaucieae*. The genus does not naturally fit into any of the present divisions of the Leptospermoideae, although there can be no doubt as to its belonging to this subfamily.

The collection and study of new materials of the 4 species of *Aulacocarpus* already described is highly desirable and it is not unlikely that a better knowledge of the genus will result in a reduction of the number of species. My own specimens do not agree with any existing description, and so I have presumed to describe them under a new name.

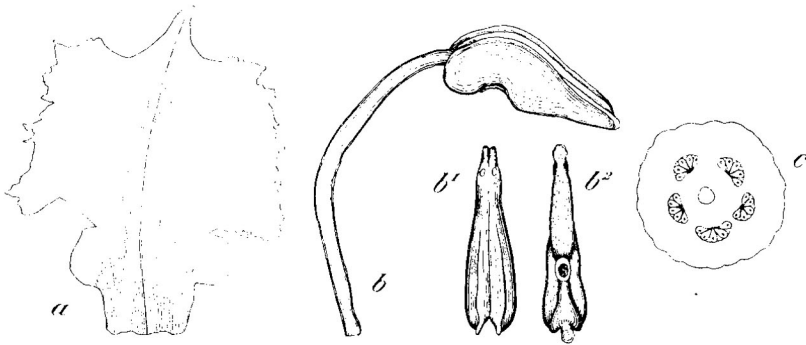
AULACOCARPUS COMPLETENS, sp. nov.

A tree up to about 18 meters high and 35 to 40 cm. in diameter at the base. Crown elongate; trunk continuous. Bark smooth, grayish. Entirely glabrous.

Leaves opposite, large, coriaceous, short-petiolate. Stipules none. Petioles thick, 4 to 5 mm. long. Leaf blades 14 to 25 cm. long, 5 to 11 cm. broad, ovate-elliptic (broader toward the base), cordate to

truncate at the base, narrowly acuminate at tip, light green above, paler and sometimes brownish beneath. Costa impressed above, very prominent beneath; primary veins numerous, almost straight and parallel, slightly prominent above and underneath.

Flowers single or aggregate at nodes on old wood (never on the year's growth). Pedicels slender, 12 to 15 mm. long, bearing at the middle one pair of small bractlets, these clasping, ovate-acute, persistent, about 2 mm. long. Receptacle funnel-shaped or obconic, growing much above the ovary. Sepals 5, coriaceous, thick, ovate-triangular and acute at the tip, caducous, about 6 mm. long and 4 mm. broad at the base. Petals 5, reflexed, pink, irregularly and broadly ovate, apiculate, with a short, broad claw and a pair of rounded basal winglets; margin irregularly denticulate or sublacerate; length 11 mm., breadth 9 mm. Stamens 10, inserted on margin of receptacle and alternately opposite to sepals and petals; filaments about 10



Floral details of *Aulococarpus completens*: *a*, petal; *b*, stamen; *b*¹, anther, ventral side; *b*², anther, dorsal side; *c*, cross-section of ovary. Enlarged 4 times.

mm. long, bending outwards; anthers 6 to 6.5 mm. long, golden yellow, basifixed, introrse, with a large ovate, glandular, porelike structure at about the middle of the ventral side, and four small glands near the tip; cells longitudinally dehiscent. Ovary 5-celled, each cell with 5 or 4 ovules; style glabrous, terete, truncate, about 7.5 mm. long.

Fruit dry, 4 to 1-celled, globose-depressed in the first case, with the cells showing outside, globose and crowned with the cuplike receptacular overgrowth when 1-celled; pericarp thick, hard, greenish outside at maturity; cells 1-seeded. Seeds large, ovoid and slightly compressed laterally, their length 11 mm., the longest diameter 9 mm.

PANAMA: Hills back of Puerto Obaldia, San Blas Coast; flowers and fruit, August 30, 1911; *Pittier* 4310 (type, U. S. Nat. Herb. Nos. 479435-7).

This remarkable species differs from *A. crassifolius* (Benth.) Berg in its larger leaves, these almost always deeply emarginate at the base, and in having the lobes of the calyx long, acute, triangular, and caducous. Further, our species is a relatively large tree, while the latter, compared in its habit with *Calycolpus glaber*, is barely more than a shrub. The wood is very hard and known under the name "gasparillo."